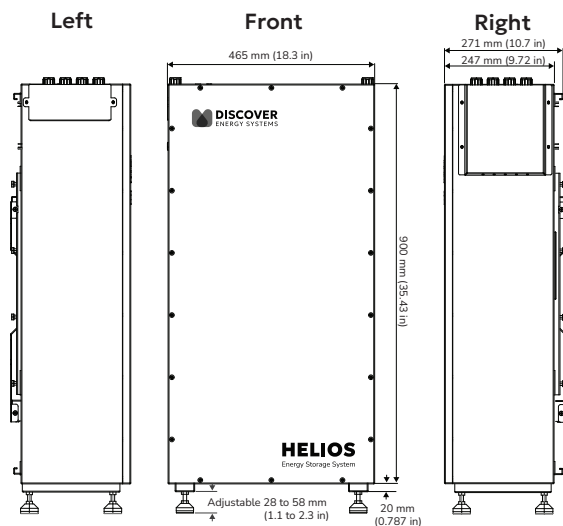


Energy Storage for Residential and Light Commercial Applications

HELIOS ESS is a high-performance lithium battery system engineered for integration with modern hybrid and battery inverters in residential and light-commercial energy storage applications. It provides versatile DC-coupled storage that supports grid-interactive, self-consumption, backup power, and off-grid operation.

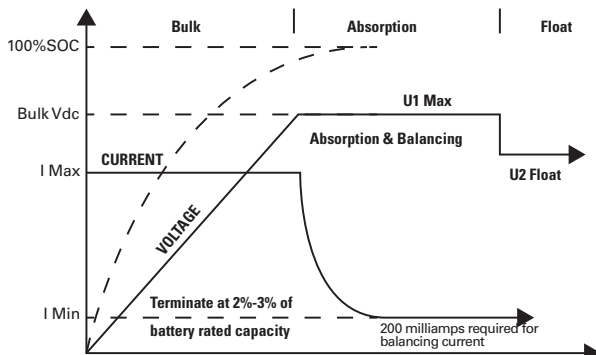
Built on Discover's 75-year legacy as a Canadian leader in energy storage innovation, HELIOS delivers 16 kWh of usable capacity in a compact, outdoor-rated enclosure with advanced 4th-generation BMS control, intelligent communication, and scalable architecture. Certified to UL 9540, UL 9540A, and UL 1973 standards, HELIOS ESS ensures safe, reliable performance and simplified installation, providing a proven and future-ready solution for dependable energy independence.

MECHANICAL DRAWINGS



MECHANICAL SPECIFICATIONS

Height	900 mm (35.3 in)
Width	465 mm (18.3 in)
Depth - body only	247 mm (9.7 in)
Depth (including Wall-Mount bracket)	271 mm (10.7 in)
Terminal	Quick Connect Plug and Pull Terminal
Weight	136 kg (299 lb)
IP Rating	IP65
Case Material	Galvanized Steel Sheet



FEATURES

HIGH PERFORMANCE

- 10 kW continuous, 19 kW peak power (10 sec)
- Advanced 4th-generation BMS for precise control and efficiency.
- 93 MWh lifetime throughput with a 10-year warranty.

ALL-CLIMATE DESIGN

- 10 kW continuous, 19 kW peak power (10 sec)
- Outdoor-rated IP65 enclosure.
- Reliable operation from -25 °C (-13 °F) to 55 °C (131 °F).
- Self-heating from -25 °C (-13 °F) to 8 °C (46 °F).

ADVANCED SAFETY

- Safe LiFePO₄ chemistry with dual fire arrestors and DC breaker.
- Rapid Shutdown (RSD) input and emergency stop for NEC 690.12 compliance.
- Certified to UL 9540, UL 9540A, and UL 1973.

SMART INTEGRATION

- Closed-loop CAN communication with hybrid and battery inverters.
- Ready for grid-tied, hybrid, or off-grid configurations.
- Simplified installation and commissioning.

SCALABLE & INSTALLER FRIENDLY

- Expandable up to 36 modules (≈ 580 kWh).
- Pre-wired parallel and inverter kits for quick setup.
- Quick-connect terminals for easy installation.

ELECTRICAL SPECIFICATIONS

Nominal Voltage	51.2 V
Nominal Capacity	314 Ah
Usable Energy	16,080 Wh
Depth of Discharge	100% ⁽¹⁾
Charge Bulk Voltage - Bulk Vdc	55.2 – 56.8 V
Charge Absorption Voltage - U1 MAX	55.2 – 56.8 V
Charge Float Voltage - U2	53.6 V
Charge Termination Current	5 A
Recommended High Voltage Disconnect	56.9 V
Overvoltage Disconnect (BMS)	58.0 V
Recommended Low Voltage Disconnect	48 V
Undervoltage Disconnect (BMS)	43.2 V
Max Continuous Charge Current	200 A
Max Continuous Discharge Current	200 A
Max Continuous Discharge Rate	10.24 kW
Peak Discharge Current (15 seconds)	300 A RMS
Self Discharge Current (operation)	≤ 25 mA
Self Discharge Current (battery OFF)	≤ 4 mA
Breaker	200 A breaker
Maximum short circuit fault current	7.16 kA (100 ms) / 3.58 kA (100 ms)
Arc Flash Incident Energy IEm	0.310 Cal/cm ²
Arc Flash Incident Energy AFB	239 mm (9.41 in)

REGULATORY

Certifications	UN38.3, UL 1973, UL 9540A, UL 9540 DC ESS 3rd Edition
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⁽¹⁾ Leaving the battery at 0% SOC will lead to irreversible damage and void the warranty. Immediately recharge the battery after discharging to 0%.

